

## Language matters: Cannabis and tobacco use among youth of diverse racial/ethnic backgrounds



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### Key points

- **“Acculturation”** is when someone adopts the values and behaviors of a new culture while still keeping some elements of their own culture.
- **Language spoken at home** is a measure of acculturation. Speaking English at home is a measure of high level of acculturation in the U.S, while speaking the language of origin is considered a measure of low level of acculturation.
- Researchers wanted to explore **how acculturation might impact cannabis and tobacco use in youth** in Washington State.
- Using **Washington State Healthy Youth Survey** data from 2014, 2016, and 2018, they looked at cannabis and tobacco use for youth of different racial/ethnic backgrounds, comparing those who primarily spoke English at home to those who primarily spoke another language.
- For **youth who spoke a language other than English** at home (compared to those who spoke English at home):
  - **Hispanic and Asian youth** were significantly *less* likely to use cannabis or tobacco,
  - **American Indian/Alaska Native, Black, and Multi-ethnic (non-Hispanic) youth** were *more* likely to use tobacco but *less* likely to use cannabis, and
  - **White youth (mostly Russian or Ukranian)** were *more* likely to use both cannabis and tobacco.
- **These findings question the widespread belief that low acculturation alone is associated with lower prevalence of substance use**, as they demonstrate that white youth are at higher risk for substance use if they speak a language other than English at home (low acculturation).
- This information can help identify **priorities for prevention and intervention efforts** targeting youth cannabis and/or tobacco use. Creating culturally relevant substance use interventions to reduce the health risks for these overlooked students should be a priority. Schools should ensure that health education/prevention materials are translated to the family's primary language before dissemination.

## Introduction

Previous research highlights the importance of acculturation—the process by which individuals adapt to another culture while navigating their relationship to their own—on health behaviors (e.g., cannabis use). Studies<sup>1,2</sup> have found that low acculturation is associated with a lower prevalence of high-risk youth behaviors common in the US such as substance use, when compared with their acculturated peers. Meanwhile, other studies report that youth who come from historically marginalized cultural backgrounds often experience a disproportionate prevalence or health burden from substance use.<sup>3</sup> We wanted to investigate what might account for these seemingly conflicting findings.

We explored cannabis and tobacco use among youth with lower levels of acculturation in Washington state, USA, according to their reported ethnicity and race. We utilized language spoken at home (English vs. non-English) as a proxy for family acculturation.<sup>4</sup> Our goal was to examine the intersectionality of race/ethnicity and level of acculturation to identify priorities for prevention initiatives.

## Methods

### ***Data source***

The Washington Healthy Youth Survey (HYS) is a bi-annual anonymous, school-based survey. HYS provides generalizable results to youths attending public schools statewide. The survey is available in English and Spanish.<sup>5</sup>

The outcome of interest, current cannabis use, is from a single question querying use in the past 30 days. For comparison, current tobacco use was derived from similar questions asking about various forms of tobacco (cigarette, pipe, vape, etc.). Ethnicity is from a select-all question, with Hispanic taking precedence; all other categories exclude those who selected Hispanic. Therefore, for brevity, Non-Hispanic white participants will be identified as white hereafter. Language “usually spoken at home” is dichotomized to English versus other.<sup>5</sup>

### ***Sample***

Data from years 2014, 2016, and 2018 and grades 8, 10, and 12 were combined to increase the total sample sizes of the variables of interest (N=75887, not all of whom answered every question).

### ***Analysis***

Analysis of the dataset included simple cross-tabs. Differences in proportions within ethnicity were tested via a simple logistic regression of the outcome on language status within ethnic subsample. The study was IRB review exempted. Differences in key variables were small enough to support

collapsing across grades and years, which facilitated meeting the state’s requirements for minimal cell sizes in reporting results.

## Results

The great majority (96.3%) reported speaking English at home. Rates of speaking a language other than English in the home ranged from 3.7% (white) to 55.9% (Hispanic). Among those white and speaking another language at home, 30.3% reported speaking Russian and 16.0% Ukrainian.

When compared with peers who speak English at home, Hispanic and Asian youth who speak other languages at home were significantly less likely to use cannabis or tobacco while American Indian/Alaska Native, Black, and Multi-ethnic (non-Hispanic) youth who do not speak English at home were significantly more likely to use tobacco. White youth were significantly more likely to have reported current cannabis and current tobacco use if they are from a non-English speaking home (Table 1).

**Table 1- Current cannabis and tobacco use, according to reported race/ethnicity and language-spoken at home among students, WA state, 2014-2018.**

Race/ethnicity	Language other than English usually spoken at home	Current cannabis (%)	Likelihood ratio, non-English versus English	Current tobacco (%)	Likelihood ratio, non-English versus English
White	No	15.4		12.7	
	Yes	19.3	1.25*	22.0	1.73*
Hispanic	No	21.6		14.6	
	Yes	17.7	0.82*	12.7	0.87*
AIAN	No	22.1		16.5	
	Yes	18.8	0.85	27.6	1.67*
Asian	No	9.2		7.4	
	Yes	5.7	0.62*	5.5	0.74*
Black	No	20.7		13.3	
	Yes	21.3	1.03	21.8	1.64*
NHPI	No	17.7		13.7	

	Yes	16.7	0.94	18.0	1.31
Other	No	14.4		13.5	
	Yes	13.0	0.9	13.7	1.01
Multiple (non-Hispanic)	No	17.7		13.8	
	Yes	20.8	1.18	20.3	1.47*

*Notes:* Except for the Hispanic category, all other ethnic/racial categories excluded respondents who self-identified as Hispanic. \*Indicates significant difference for rates within ethnicity ( $p < .05$ ), from logistic regression of outcome on language status.

## Discussion

To date, previous studies in the U.S. have not compared the likelihood of tobacco and cannabis use among youths of diverse ethnic and racial backgrounds, according to language spoken at home, an indicator of acculturation level. Our results suggest that the intersectionality of race/ethnicity and language-spoken at home result in risk profiles that are not homogeneous.

Our findings for Hispanic and Asian youth are consistent with previous studies<sup>1,2,6</sup> describing lower acculturation as a protective factor for cannabis and tobacco use. However, in contrast, some of our results conflict with previous studies. First, American Indian/Alaska Native, Black, and Multi-ethnic youth with lower levels of acculturation were significantly more likely to consume tobacco. This may reflect different tobacco norms in their cultures of origin or different routes of coping with acculturative stress.

Second, white youth who speak a language other than English at home were more likely to report cannabis and tobacco use than their peers. This finding challenges the common practice of categorizing white youth as a homogeneous group and suggests that white youth with non-mainstream identities encompass groups with different risk profiles. We found that within-group variation of substance use patterns among white youth may be greater than between group variations, therefore intersectional analysis is essential in understanding substance use patterns for them.

Of note, a high proportion of the white sample reported speaking Ukrainian or Russian at home, countries with tobacco use rates far higher than the U.S.<sup>7</sup> Following the start of war between these countries in 2022, Ukrainian and Russian immigrants to the US may increase and create a larger student population from these countries.<sup>8,9</sup> Fleeing from war, their experience of trauma is an additional risk factor for detrimental health behaviors and should be considered.

Creating culturally relevant substance use interventions to reduce the health risks for these overlooked students should be a priority. Schools should ensure that health education/prevention

materials are translated to the family's primary language before dissemination. Resettlement agencies should include tobacco and cannabis prevention content in their outreach to families. Finally, when planning interventions, it is important to consider that hate crimes and racist rhetoric experienced by the Asian, Hispanic and Black communities have increased nationally and locally. Students who do not speak English at home of any race/ethnicity may experience bullying, feel more vulnerable, less confident, and excluded more intensively than those who have adopted English as their dominant language.

Limitations of this study include self-report and the regional nature of the data obtained. Also, response rates were the lowest among 12<sup>th</sup> graders,<sup>5,10</sup> and differential class attendance rates by seniors in our ethnicity-by-language categories may have shifted relative rates of tobacco and cannabis use. Another limitation is that HYS was available in Spanish and English, providing Spanish-speaking participants with low English proficiency an advantage in participation. Finally, language spoken at home is a limited indicator for acculturation, but often the only one available to identify the complex and often-non-linear process of transitioning from one culture of reference to another. Language spoken at home may indicate contextual factors such as recency of immigration to the U.S. and influence of substance use prevalence in the country of origin among other contextual factors not usually considered when designing prevention intervention for youth.

The main strength of this brief study is the identification of relationships between ethnicity/race and acculturation. Research in other contexts should explore further the role of language spoken at home as a mediator to substance use risks among youth and determine effective prevention interventions for youth with lower rates of acculturation.

## **New contribution to the literature**

This brief study suggests that the intersectionality of youth race/ethnicity and language-spoken at home (a proxy for acculturation) results in risk profiles for tobacco and cannabis use that are not homogeneous. Although lower levels of acculturation are protective for some youth, white youth with low levels of acculturation are more likely to report tobacco and cannabis use than their white counterparts. We found that within-group variation of substance use patterns among white youth may be greater than between group variations, therefore intersectional analysis is essential in understanding substance use patterns for them.

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